

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P17753WO1	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE 2003/001882	International filing date (day/month/year) 04-12-2003	Priority date (day/month/year) 03-07-2003
International Patent Classification (IPC) or national classification and IPC H04L 12/28, H04Q 7/38		
Applicant Telefonaktiebolaget LM Ericsson (publ) et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 07-01-2005	Date of completion of this report 03-10-2005
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Ralf Boström/MN Telephone No. +46 8 782 25 00

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE 2003/001882

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1 - 10 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* 1 - 2 received by this Authority on 22 - 06 - 2005
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages 1 - 8 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE 2003/001882

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-8</u>	YES
	Claims	<u>---</u>	NO
Inventive step (IS)	Claims	<u>1-8</u>	YES
	Claims	<u>---</u>	NO
Industrial applicability (IA)	Claims	<u>1-8</u>	YES
	Claims	<u>---</u>	NO

2. Citations and explanations (Rule 70.7)

Documents cited in the International Search Report:

D1. Jin Xiaohui et al: "IAPP Enhancement Protocol", November 2001, IEEE document.

D2. Duolog Technologies: "WLAN Access Point IAPP Solution", 2002.

D3. US 6473413 B1

The cited documents represent the general state of the art. The invention defined in claims 1-8 is not disclosed by any of these documents. The cited prior art does not give any indication that would lead a person skilled in the art to the claimed method of terminating access for a WLAN station. Therefore, the claimed invention is not obvious to a person skilled in the art. Accordingly, the invention defined in claims 1-8 is novel and is considered to involve an inventive step. The invention is industrially applicable.

Claims

1. Network comprising at least one access point (AP1, AP2) and one access controlling node (WSN, AS), the access points making use of the IAPP protocol for inter
5 AP communication, wherein at least one station (STA1) may associate with the access points (AP1, AP2), whereby the identity of the station can be approved by the access controlling node (AS), wherein
- the access controlling node (AS) monitors whether a given station is having access to any of a given subset of access points and monitors an account relating to
10 the given station being associated with a given access point of the subset of access points,
- if detecting that the account relating to the given station is zero or if the user of the
15 station has been idle for a given length of time,
- the at least one access-controlling node (AS; WSN) issues at least one IAPP message causing the AP of the subset with which the station is currently associated to disassociate the given station and thereby terminating access for the given
20 station.
2. Network according to claim 1, wherein a first access-controlling node (AS/ WSN) is an authentication server connected to the Internet.
- 25
3. Network according to claim 2, wherein a second access control node is provided, the second access control node being a gateway node (WSN).
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4. Network according to claim 2, wherein the access-controlling node issues an IAPP ADD notify message.
- 35
5. Network according to claim 2, wherein the access-controlling node issues an IAPP move notify message.

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6. Network according to claim 3, wherein the access-controlling node issues a Lock out request (103) to the gateway node.

5

7. Access controlling node connecting to at least a group of access points, the access points making use of the IAPP protocol for inter AP communication and providing access to at least one station (STA1), the station (STA1), whereby the identity of the station can be approved by the access controlling node (AS), whereby

10

the access controlling node (AS) is monitors whether a given station is having access to any of a given subset of access points and monitors an account relating to the given station being associated with a given access point of the subset of access points,

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if detecting that the account relating to the given station is zero or if the user of the station has been idle for a given length of time,

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the at least one access-controlling node (AS; WSN) issues at least one IAPP message causing the AP of the subset with which the station is currently associated to disassociate the given station and thereby terminating access for the given station.

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8. Method of terminating access for a WLAN station comprising the steps of

monitoring whether a given station is having access to any of a given subset of access points and monitoring an account relating to the given station being associated with a given access point of the subset of access points,

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if detecting that the account relating to the given station is zero or if the user of the station has been idle for a given length of time,

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issuing an IAPP message causing the access point of the subset with which the given station is associated to disassociate the given station.